1   **Title:**   System and Method for Influencing Dynamic Community Shared Elements of

2   Audio, Video, and Text Programming Via A Polling System

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4   **Field of the Invention**

5   This invention relates generally to dynamic creation of video programming. More

6   particularly, the present invention comprises a system and method for allowing a community of

7   individuals to influence the outcome of video programs.

8   **Background of the Invention**

9   The Internet has lead many computer users to desire a highly interactive environment.

10 This has spilled over into the cable environment as well where interactive set top boxes have

11 begun to appear. This type of interaction enhances the experience of the viewer and makes such

12 viewing more pleasurable.

13   Interaction of viewers with programming has been the subject of various developments.

14 For example, U.S. Patent No. 5,737,527 to Shiels, et al., assigned to U.S. Phillips Corporation,

15 (the'527 patent) describes branch-structured narrative entertainment. It includes both standalone

16 entertainment devices as well as broadcast and subscription services. The narrative branches to

17 different story line paths based upon viewer responses to prompts.

18   Patent 5,737,527 describe the ability of a viewer to vote on the direction of a broadcast.

19 U.S. Patent No. 5,848,934 to Shiels, et al. (the'934 patent) describes a branch-structured

20 narrative entertainment. The narrative branches to different story line paths based upon

21 "modified attribute values."

22 World IPO Patent No. WO 94/13105 and U.S. Patent 5,465,384 to Bejan, et al. describe an

23 interactive system in which the audience influences the outcome of a program.

24   U.S. Patent No. 4,305,131 to Best. (the '131 patent) describes an interactive

25 entertainment system incorporating a speech recognition system in which the viewer is treated as

26 a character in the narrative of a motion picture.

27   U.S. Patent No. 4,569,026 to Best (the '026 patent) is a Continuation in Part (CIP) of

28 U.S. Patent No. 4,305,131 to Best. The '026 patent describes an interactive entertainment system

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1 incorporating a speech recognition system in which the viewer is treated as a character in an

2 interactive video game story. At branch points in the picture, the viewer makes voice responses

3 to audio questions (or asks questions).

4 U.S. Patent No. 4,974,252 to Osborne (the '252 patent) describes a

5 commercial/entertainment network for interactive communications between separate theatres and

6 a remote broadcast center in a fashion to reduce required interconnecting bandwidth while still

7 providing near real time updates of polling results to viewers..

8 U.S. Patent No. 4,591,247 to Freeman (the '248 patent) describes a movie changeover

9 system capable of providing real time decision tree movie presentations. Movie content depends

10 on viewer response to branching choices.

11 U.S. Patent No. 5,795,228 to Trumbull, et al. (the '228 patent) describes a system for

12 interactive-computer shows that are directed by individual users through a networked

13 entertainment system.

14 Interactive Entertainment Article by William Homer Hilf describes branching narrative

15 movies shown to viewers who can "vote" for various outcomes using buttons attached to their

16 theatre seats.

17 These references all indicate the desire of viewers and program decision makers

18 to have viewers involved in the programming process.

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20 As previously noted, network user interaction in the audio, video, and media (collectively

21 referred to herein as "content") marketplace generally is increasing. Using the Internet as but

22 one example, currently network users can select the types of news which the particular network

23 user may wish to see. Systems such as Pointcast and Yahoo all allow the configuration of news

24 articles for a particular network user. Similarly, communities of individuals can provide

25 guidance concerning the development of episodes in a television show. For purposes of this

26 invention a "community" is a collection of people having access to the same point of view or

27 potentially different points of view of the same media asset or interactive environment. These

28 media assets are being referred to as "shared elements." This type of interaction is exemplified

1 in itsyourmovie.com. Indeed, on Broadway, certain plays and musicals have allowed the

2 audience to select who would be the villain or what would be the outcome of a particular play.

3 Such flexibility has not typically been available over cable television networks or other

4 interactive community or broadcast type networks.

5 What is therefore desired is a system and method for allowing a community of

6 participants on a network be it audio, video or text based interaction, (collectively network users)

7 network users to be able to influence the programming on the network in real time or near real

8 time.

Summary of the Invention

10 It is therefore an objective of the present invention to allow network users to have their

11 opinions counted toward the outcome of broadcast content on a network.

12 It is yet another objective of the present invention to allow network users to vote via an

13 interactive mechanism to affect the outcome of a broadcast program.

14 It is yet another objective of the present invention to provide for a revenue stream for a

15 system operator based upon a "pay to vote" system.

16 It is still another objective of the present invention to allow network users network users

17 to purchase voting "tokens" of different values indicative of the weight of the vote to be used by

18 network users in influencing the outcome of a particular broadcast. It is a further objective of the

19 present invention to provide a synchronized poll with every broadcast to allow network users at

20 any given point in the broadcast to influence the next video segment in a broadcast.

21 These and other objectives of the present invention will become apparent to those skilled

22 in the art from a review of the specification and detailed description that follows.

1   The present invention allows for a community of network users on a broadcast system to

2   affect the outcome of content that is broadcast on the system. Such network users can be, for

3   instance, listeners to an audio broadcast, network users of a video broadcast, those using wireless

4   fixed and handheld devices and participants in a chat session on the Internet. All such

5   individuals are referred to herein as "network users." Similarly the term "broadcast center" as

6   used herein means the central location from which the audio, video text or on-line interactive

7   session originates. Through interactive means available such as a set top box or, when video

8   content is broadcast via PCs, interaction can take place via the PC interface that network users

9   can notify the broadcast service of their desires for a particular program or the outcome of that

10   program.

11   Using the broadcast interface, network users can cast votes which are then transmitted to

12   the broadcast center as to how the network users desire a particular broadcast program to go. For

13   example, a community of network users may desire to have a particular type of ending (sad or

14   happy) to occur for a particular broadcast. In the event of a program that is broadcasting an

15   interview, network users may wish a particular interview to continue for a longer period of time,

16   or truncate a particular interview and move on to a new topic. These and other types of

17   outcomes will be discussed below. Of most importance to the present invention is the ability of a

18   community of network users to influence the direction of a particular broadcast.

19   Using the present invention, a network user registers with the broadcast system, be it a

20   cable TV system or other type of broadcast system in a normal fashion. The network user is

21   offered the ability to purchase vote tokens which are charged to the network users account. For

22   example, each token may be worth fifty cents. Alternatively, the network user can purchase

23   tokens which are worth multiple votes, for example, a ten-vote token for five dollars. Further, a

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1 network user can pay for various levels of network user interaction. For example, a network user

2 may be a normal network user, a "gold" network user, or a "platinum" network user with each

3 different level of network user having different weights for the vote for each network user. The

4 network user would pay an additional premium for having an increased weight associated with

5 the network user vote. All network users in the same class may start with a fixed set of tokens

6 upon initiation of service subscription or at the beginning of a particular program.

7   During the course of a particular program, network users are offered the opportunity to

8 influence the direction of a broadcast by virtue of periodic polls of network users being offered.

9 Thus, during the course of a program or at a commercial break, individual network users are

10 offered the opportunity to cast a vote regarding how the network users would like the program to

11 proceed. All the votes are counted and, in a typical case, the majority of votes or the distribution

12 of votes based on an algorithm will dictate the direction in which the program will proceed.

13 Results of the vote count are presented to all the network users so that they can understand why

14 the program is moving in the direction that it is. Thereafter, the program proceeds in the

15 direction that is voted by the majority of the network users. The real time feedback of voting

16 status can also be provided to allow users to decide if they want to vote more or higher value

17 tokens to potentially control the outcome towards their preference. Additionally the feedback of

18 community voting status may be masked from the community for applications desiring blind

19 voting.

20   Thus, the outcome of any particular vote is shared amongst all the members of the

21 community, rather than having a single network user select how a particular program is to be

22 presented to that single network user. Thus, a shared experience is created in the broadcast

1 media. In short, the present invention is a subscription type, token-based service that allows for

2 the voting of individual network users to have an influence over the direction of broadcast media.

3 The present invention offers a number of advantages. For the network user, an

4 opportunity to influence the path of broadcast media is presented. A community of network

5 users can vote on the direction desired and the broadcast content will follow that path. The vote

6 associated with the path will be presented to all network users so that a sense of community can

7 be developed.

8 For content producers, such a system offers the enhancement and encouragement of

9 network users to view a particular program a number of times. Since the replay of a particular

10 broadcast can vary each time that broadcast is made, producers of the broadcast can look forward

11 to increased network users participation even at replays. Since the end result is different,

12 network users will be drawn to view particular broadcasts more than one time. Content

13 providers can also increase network user participation by allowing the polls to discover all

14 possible paths and sequences through the content resulting in some rare paths being under great

15 demand by a set of network users.

16 For live programs, producers of such a live program can have network user interaction in

17 a more effective way. Thus, if a particular interviewer is conducting an interview that does not

18 hold network user interest, rather than the network users leaving the broadcast entirely the

19 network users can influence the broadcast, notify the producer that a particular interview should

20 end, and that the subject matter should change. Thus, network users are more likely to stay with

21 a particular program since they can, in part, control the content and thus, ratings for the particular

22 program will increase.

1   Certain network users can pay to have a greater influence on the outcome, thus enhancing

2   their experience and providing additional revenue to the system provider. Since the service is a

3   pay service, one person cannot vote more than one time unless the person pays for each vote.

4   The system and method of the present invention will be further understood by reference

5   to the detailed description that follows.

6   **Brief Description of the Figures**

7   Figure 1 illustrates the communication exchange of the present invention.

8   Figure 2 illustrates the token purchase flow of the present invention.

9   Figure 3 illustrates the voting process and impact of the voting process.

10   Figure 4 illustrates the generalized architecture of the present invention.

11   Figure 5 Illustrates one of the preferred architectures of the present invention.

12   **Detailed Description of the Invention**

13   As noted above, the present invention is a system and method for allowing a community

14   of network users to influence the outcome of programming. Referring to **Figure 1**, the

15   communication exchange of the present invention is illustrated. Network users register **10** with a

16   network provider and request tokens that allow the network user to vote in any particular poll

17   that the network user desires. The network provider provides the tokens **12** to the network users

18   for subsequent use. As will be noted below, the number of tokens and the charge for those

19   tokens are all made in the usual accounting that is known in the art and occurs with normal

20   content systems such as cable television and the like. Content providers thereafter provide

21   content **14** to network users for subsequent viewing. The network provider provides the various

22   poll questions **16** to the network users for subsequent voting regarding the content. Additionally

23   these polls may be inserted in-band into the program stream from the content provider, Network

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1   users can then vote **18** by using the tokens that have been provided to the network users and will

2   vote based upon the poll questions **16** that have been provided during the course of the content.

3   That vote **18** is provided to the network provider that tallies the vote and provides the vote results

4   **20** to the content provider for subsequent modification of the content. In addition, the poll

5   results are separately provided **22** to the network users so that the network users can see how

6   their respective community of network users voted on the particular poll in question. Longer

7   duration polls **16** may be ongoing while feedback to network users **22** occurs so that each

8   member of the community has visibility into the shared dynamic and the opportunity to

9   contribute to or control the dynamics of the community based on response from other community

10   members. This is a desirable feature when the members of the community are not in visual or

11   aural communication with each other and provides a way to have many of the same responses

12   and interactions as they would if they were in the same room. After the poll results had been

13   made available to he content provider, the content provider then provides modified content **24** to

14   the network users.

15   Referring to **Figure 2**, the token purchase flow of the present invention is illustrated. A

16   network user, who may be a new network user on the network or an existing network user that

17   simply wants to take advantage of the voting aspect of the present invention, registers with the

18   network server **30**. The network user is then asked if the network user wishes to purchase tokens

19   **32**. If the network user does wish to purchase tokens, the network user selects the number of

20   tokens desired to be purchased **34**. Each of the tokens has a monetary value. Depending upon

21   the number of tokens purchased, the total token purchase is credited to the network user's

22   account **40** and the network server bills the network user for the tokens purchased **42** in the usual

23   fashion for billing for network use. Alternatively, and without limitation, network users can

1   establish account with balances for the purchase of tokens, network users can be given tokens as

2   incentives to use the system of the present invention thereby building loyalty, tokens can be won

3   in a contest, tokens can be awarded based upon network user participation in other activities such

4   as shopping, and other means.

5   If the network user does not desire to purchase multiple tokens, the network user is asked

6   if the network user wants to purchase weighted tokens **36**. Weighted tokens are individual

7   tokens that carry a larger vote weight than other tokens. The network user can select from

8   various token weight levels depending upon the interest that the network user has and the amount

9   of money that the network user desires to spend. If the network user does desire to purchase

10   weighted tokens, weighted tokens are purchased **38** and the network user's account is credited

11   with the amount of tokens purchased **40**. Again, the network user will be billed in the normal

12   course for the tokens purchased **42**.

13   If a network user does not desire to purchase any tokens, the network user simply

14   answers no to all questions and the network user's account will not be credited with any voting

15   tokens, nor will the network user be billed.

16   Thereafter, the network user is free to use the tokens during the course of any poll that is

17   offered by the network as will be more fully explained below.

18   Referring to **Figure 3**, the voting process and impact of the voting process is illustrated.

19   Network users view the content over the network **50**. From time to time the network server of

20   the present invention provides a poll to the network users **52** concerning various aspects of the

21   content being shown. For example, if a live broadcast is being sent, the network users can be

22   offered the ability to truncate interviews, move to a new topic, or other responses. In the event

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1 that a pre-recorded program is being shown that has optional elements, the network users can be

2 polled to determine what elements they would like to see next in the content being shown.

3 Thereafter, network users, who have a token balance in their accounts can vote based

4 upon the poll being offered to the network users **54**. Network users can select the number of

5 votes they wish to cast, and their selection with respect to the options offered. Alternatively, the

6 poll can be structured, depending upon the desires of the content provider, to allow only one vote

7 at a time by network users. The poll structure itself can be dictated by the content providers

8 depending upon their desires for input and the ability of the content providers to modify the

9 content being presented to the network users.

10 After an individual network user votes, the vote is recorded by the network server **56** and

11 the vote or number of votes made by the particular network user is deducted from the network

12 user account **58**. The server also tallies all of the votes **60**, and notifies the network users of the

13 results of the vote **62**. In this fashion, a community of network users can determine how their

14 vote in a particular poll was made and the impact of that vote. The server also sends the tally of

15 the votes to the appropriate content provider. Thus, if a content provider has optional content

16 that will be provided based upon the votes, that content provider is notified **64**. As another

17 example, if a live studio feed is occurring, the server notes the tally of the votes to the live studio

18 **66**. Additionally, other types of content providers may desire to have vote tallies for a variety of

19 reasons that would affect further programming, production of additional segments, and other

20 factors **68**. Based upon the votes made, the various content providers will modify the content

21 being sent to the viewing audience and that content can be modified in real time or near real time

22 and sent back to the network users who can then view that modified content **50**. In this fashion,

1   the network users can see how their votes have affected the actual content that is being provided

2   to them.

3   Referring to **Figure 4**, the generalized architecture of the present invention is illustrated.

4   Network users **70, 72,** and **74** are connected to a network **76** to receive video content and polling

5   requests. It should be noted that while three network users are indicated in this figure, this is not

6   meant as a limitation. For example, and as is well known, there are literally thousands of

7   network users on a cable network as well as network users who may potentially receive video

8   over the Internet. Thus, the network **76** is illustrative of both a cable television network as is

9   normally known, and may also in certain instances be the Internet or other media access network

10   where network users are viewing video content or other applicable media assets over the Internet

11   or media access network.

12   As discussed herein the network can be a typical centralized network with broadcast of

13   content coming from a central location. Alternatively, the network could potentially be a

14   distributed network where the poll server defines the scope of the community. For example a

15   poll server could be placed in each regional data center and at a national data center so that

16   certain polls and content are applicable to all subscribers attached to the network or to just a

17   small set with one poll servers. Thus a plurality of poll servers at different places in the network,

18   and also a plurality of poll servers that can communicate with a Master poll server for those polls

19   and content are equally considered to be within the scope of the present invention.

20   The network server **78** connects to the network users **70, 72,** and **74** and provides video

21   content to those network users. Network users register with the network server **78** for the desired

22   service in the usual fashion. However, the network user's can also register for voting tokens that

23   are offered by the network server **78**. The network server may have its own content which it

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1   provides to network users, but is also connected to certain live studios **82** which provide a live

2   video feed to network users via the network server. The studio has its own schedule of events **92**

3   which relates to the schedule within a particular show as well as the schedule over any particular

4   period of time, whether it be day month or year. The network service also connected to other

5   content providers **84** which may provide pre-recorded content to network users. In certain

6   instances, the content provider **84** may have optional content **86**, which can be presented to

7   network users depending upon the poll of the network users.

8   Similarly, other content providers **88** may also be connected to the server **78** and provide

9   pre-recorded video content. For such providers, the polling of the present invention allows them

10   to make future plans **90** for additional segments and/or productions that may be desired by the

11   network users.

12   Depending upon the content that is provided by the various content providers **82, 84**, and

13   **88**, the content providers may wish to solicit an interaction from the individual network users by

14   virtue of poll questions. The poll questions to be posed by the network server **78** are provided by

15   the content providers to the network server. The network server stores the poll questions **80** and

16   schedule those poll questions to be displayed to the network users **70, 72**, and **74** during

17   appropriate times associated with the individual content provider content. Thus, during a live

18   studio broadcast from a studio content provider **82** poll questions associated with the live studio

19   feed are retrieved from a poll question database **80** and provided by the network server **78** to the

20   network users **70, 72, and 74**. The network users will then vote based upon the poll questions

21   which vote will then be tallied by the network server **78**. The network server **78** will then inform

22   the studio **82** of the results of the poll as well as charge the individual network user accounts for

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1 the vote tokens used as noted earlier. Similarly, results from a different poll can inform content

2 provider **84** as to which optional content **86** is to be fed to the network users.

3 Referring to **Figure 5** the overall architecture of the present invention is illustrated.

4 Interactive devices **92,94,96, 98** all represent different types of devices that interact in the

5 community polling of the present invention. Various interactive devices may be a television

6 with interactive set top box **92**, home PC **94**, wireless laptop **96** or other wireless device **98** log

7 onto the transaction server **100** of the present invention. These devices are not meant as a

8 limitation. Any device now or in the future that has an interactive capability will be suitable for

9 use with the present invention. The transaction server informs the poll server **106** that a valid

10 user exists on the system and the amount of vote tokens that are possessed by the valid user. The

11 poll server stores this information for subsequent voting by the users.

12 If the users desire to purchase tokens, an accounting server **102** accesses user accounts

13 **104** for financial information that relates to the purchase of tokens, such as credit card access and

14 other information allowing tokens to be purchased.

15 When a time for a polling takes place, users are informed of the polling via explicit

16 coupling in the video stream or through other polling means. Thereafter users use their tokens to

17 vote in a particular poll which vote is communicated to the poll server **106**. The poll server

18 receives the votes of individual users and stores those poll results **108**. After all votes are taken,

19 the poll server provides the vote tallies back to the users **92, 94, 96, 98** so that such clients can be

20 informed of the poll results.

1   The system of the present invention also comprises a smart video server **112**.

2 This smart video server **112** receives programming from various sources which have been

3 modified in response to the polling that has taken place. For example, live feeds **116** can

4 be served over the smart video server **112** or archived video **114** can be served to users

5 based upon the voting of the viewers. The programs and content are then sent to the

6 television **120** or other device **92, 94, 96, 98**. It is important to note that while this

7 diagram depicts video as the shared content, the actual content can be any form of

8 communication such as audio, radio, or games all of which will be served to community

9 of users. Poll meta data **110** that is information concerning the polls that are to be

10 presented are provided to the poll server. This information can be the number of times

11 and times of day that a particular poll is to be made and other information concerning the

12 poll. Producer **118** provides information to the poll meta data database **110** concerning

13 when any particular poll is to be served to users. Information concerning poll results

14 from the poll results data base **108** are served to various sponsors for accounting

15 purposes, and for planning future production. Such accounting functions are in order to

16 report when particular polls have been played in order to report contract fulfillment. In

17 addition, poll results **108** provide real time feedback to create new polls **120** which

18 producer **118** can subsequently serve to the poll server **106**.

19   The system and method for influencing community shared elements of a

20 broadcast via a polling system can be used in a variety of ways, such as talk shows (radio

21 or TV), game shows (play along), court shows (you play the part of the judge), improv

22 comedy, improv acting, food show, dare contest/candid camera, obstacle course where

23 you can control dynamic obstacle placements, choose camera, choose character to trail,

interview, live act show, concert (song requests), radio station, live act contest, animal

show, virtual government, behind the scenes, outtakes, director's cut, controlling order of

news clips, controlling whether to expound upon the last news topic, controlling whether

to expound upon any element before continued with the main narrative, ad selection,

controlling point of sale commerce, controlling inventory volume, choosing camera

angle, camera style/digital effect, concert, interview, travel show, filtering massive

datastores of content into a network user-structured programming order, soap opera plot,

series plot, movie plot, chat room topics, or control someone's daily life (AI/consensus

generates options as the person goes about daily life). Environment aspects of gaming

environments can be controlled by this system and method such as battles outcome, luck

enhancement, skew natural event probability weights, skew AI event probability weights,

or , balance of power in the universe. The effectors could be any of the following

elements: camera angle, directorial style, camera effect, questions, answers, plot path,

point of view, location/weather, aesthetics, objects in environment, luck/fate/chance

probabilities, behavioral aspects over time.

As yet another embodiment of the present invention the server of the present

invention allows the creation of a 'buddy list' for users whereby users can form a

community-within- community (a "Sub-community"). Using the buddy list, individual

users who are on one another's buddy list can view in real time how their sub-community

is voting on any program. This further adds weight for the sub-community in its voting

since, if the individuals are like-minded, they can vote as a block for the effect desired on

the programming.

As part of the ability to vote as a block, the server of the present invention allows for a "pre-vote by the sub-community to see how like-minded the individuals really are. In this way the sub community can adjust its vote as desired to more fully affect the course of programming.

After voting has been completed, statistics are presented to both the community and the sub-community so that the voting trends of the group and subgroup can be viewed.

As part of the present invention network users responses and histories are saved to provide targeted advertising and programming. This could be accomplished by associating the typical demographic information with poll responses. Such advertising can be accomplished on an anonymous basis since the system of the present invention can target advertising at the community members without violating the privacy of the network users For example an abstracted unique identifier associated with a network user's voting patterns with polls with questions that would lead advertisers to believe with high probability that the particular network user would want to buy their products. Advertisers could then choose the content of the polling questions that are indicative of network user preferences. Advertisers could then be offered (sold) polling opportunities for their questions in much he same way the advertising space is sold with the polling results made available to the advertiser purchasing the polling opportunity.

The present invention will also find utility in the world of on-line gaming. For example, in the shared gaming universe, the poll weighting can potentially affect multiple perspectives of the gaming universe, such that the changes affects different members of the community differently depending on their point of view within that gaming universe.

1   A system and method for influencing community shared elements of a broadcast

2   via a polling system has been illustrated. It will be appreciated by those skilled in the art

3   that other elements may be added to the system of the present invention without departing

4   from the scope of the invention as disclosed.

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